



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,711	12/05/2001	Andrew G Ritchie	124-910	7131

7590

07/31/2003

Nixon & Vanderhye
8th Floor
1100 North Glebe Road
Arlington, VA 22201-4714

EXAMINER

WRIGHT, WILLIAM G

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 07/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/980,711

Applicant(s)

RITCHIE ET AL.

Examiner

William G. Wright SR.

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Claims 9 and 10 provide for the use of molten sulfur as a solvent for the production of a sulfide, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 9 and 10 are rejected under 35 U.S.C. § 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. § 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 1-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takada et al. '836 or Takada et al. '327 or Tomczuk '069 each in view of EP 0 802 161 A1.

Takada '836 teaches lithium transition metal sulfides to include iron and titanium sulfides. These teachings are found in columns 4-6, Examples 2, 3 and 4 and in the claims 1 and 4 of the reference. The specific use of molten process conditions is taught at Example 2 of Takada '836 reference. Takada '327 teaches the instantly claimed transition metal sulfides and the use of molten conditions in the making of these sulfides in Examples 1-3 and the claims of the reference. The Tomczuk '069 reference teaches the production of a lithium iron sulfide by a

method of melting at columns 2 and 3 of the reference. Claims 1 and 2 also teach the instant method of melt processing in the production of the lithium metal compounds.

Each of the primary references is deficient in the teaching of the specific use of molten sulfur as a reaction medium for the production of lithium transition metal sulfides.

EP '161A1 teaches the use of molten sulfur in the production of a sulfide at the Example of column 2 and in the claims.

It would be obvious to use the teaching of molten sulfur in the process of the primary references since the sulfiding process of the primary references makes sulfides that have electrochemical utility and the process of the supporting references makes compositions that have electrochemical utility. The most compelling feature that draws the teaching of the use of molten sulfur to the primary references is that in all cases sulfides are being manufactured. It is worth noting that in all cases the sulfiding is making a substance that has electrochemical utility. It would be obvious from the teachings of EP '161A1 to use molten sulfur in the manufacturing of a sulfide as claimed in the instant claims.

Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takada et al. '836 or Takada et al. '327 or Tomczuk '069.

Serial No. 09/980,711

-5-

Art Unit 1754

Each of the applied references teaches the lithium transition metal sulfide of the instant claims to be obvious. Note the Examples and the claims of each reference. The instant claims are directed to a lithium transition metal sulfide made by the process of claim 1. The process limitations of claim 1 have not been shown to patentably distinguish over the prior art. In re Best et al., 195 USPQ 430 is cited in support of the Examiner's position.

Claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0 802 161 A1.

EP '161 teaches the use of molten sulfur as a reaction medium, note claim 1 for this teaching. The reference teaches this use of molten sulfur to make a sulfide thus teaching the features of instant claims 9 and 10.

The missing feature of a lithium transition metal sulfide of claim 10, would be an obvious feature found in the motivation of making a sulfide as taught by the applied reference.

Claims 4-6 are objected to as being dependent upon a rejected base claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William G.

Serial No. 09/980,711

-6-

Art Unit 1754

Wright, Sr. whose telephone number is (703) 305-7792. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 5:00 P.M.

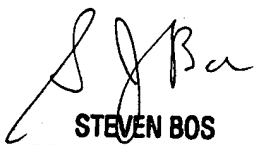
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (703) 308-3837. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9310 for the regular communications and (703) 872-9311 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1495.



W. G. Wright, Sr.:cdc

July 25, 2003



**STEVEN BOS
PRIMARY EXAMINER
GROUP 1100**